Weekly Influenza Surveillance Report

Maryland Department of Health and Mental Hygiene | Infectious Disease and Environmental Health Administration
Office of Infectious Disease Epidemiology and Outbreak Response

SYNOPSIS

Influenza activity remained "**widespread**" in Maryland during the week of January 23 to 29, 2011. Cases of influenza were reported throughout Maryland. The number and proportion of visits to sentinel providers and emergency departments for influenza-like illness remained elevated similar to week 3 (January 16 to 22). Five outbreaks of respiratory disease were reported last week. The proportion of Maryland residents reporting ILI through MRITS decreased slightly. The State Laboratories Administration reported positive PCR results in samples submitted last week for influenza types A (H1N1), A (H3), and type B.

PLEASE NOTE: Influenza is not a reportable condition in Maryland. As a result, we rely on select sources of information such as some (sentinel) clinical labs and physician offices, and the public. Because these sources cannot report all cases in the state, the counts contained in this summary do not represent the true number of cases of influenza in Maryland. They do provide valuable information about trends. All data are preliminary and subject to change.

INFLUENZA-LIKE ILLNESS SURVEILLANCE (ILINet)

During week 4, 14 sentinel providers reported 321 (4.3%) of 7,414 visits to their practices were for ILI. This is below the state baseline of 5.6%.

This same week last season, when influenza activity peaked late in October of 2009 and was on the decline by December, the proportion of visits for ILI was 2.7%.

For more information on the US Outpatient Influenza-like Illness Reporting Network (ILINet), please visit our website: http://dhmh.maryland.gov/fluwatch and click on "ILINet Sentinel Providers".

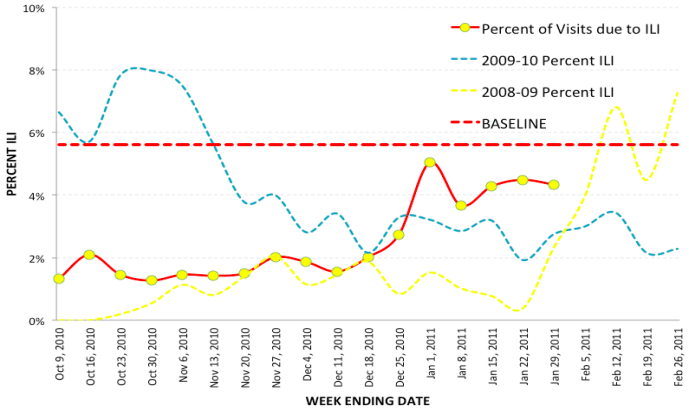

Figure 1. Proportion of visits for ILI to ILINet sentinel providers, 2010-11 influenza season

CLINICAL LAB REPORTS OF RAPID FLU TESTING

During week 4, 20 sentinel clinical laboratories reported 639 (22.7%) of 2,817 rapid influenza tests as positive: 552 were positive for type A, and 87 were positive for type B influenza. This proportion of positive tests was higher than the proportion reported at this time last season, which was 2%.

While not as accurate as PCR tests, rapid influenza tests become more accurate as the flu season progresses and influenza is more prevalent in the community. As a result, rapid influenza tests and their results are good indicators of who was sick enough to be tested and who truly has the flu.

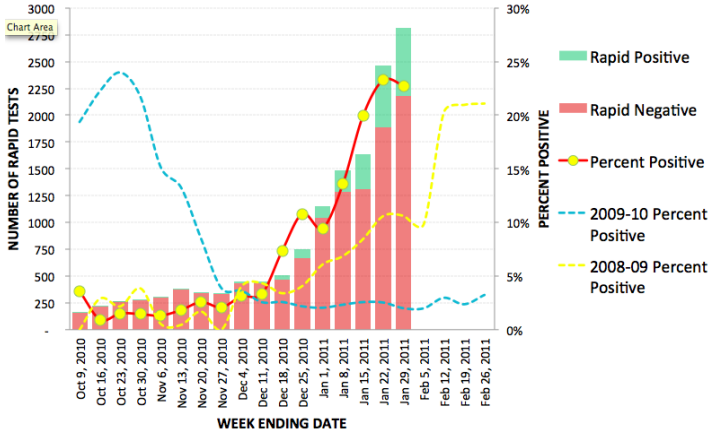

Figure 2. Number and result of rapid tests reported by sentinel clinical laboratories, 2010-11 influenza season

Type of Positives	Number (%)
Type A	1,804 (88%)
Type B	237 (12%)
Positive, but not typed	0
Total Positive	2,041 (100%)

Table 1. Number of positive rapid influenza tests, by type, reported by collaborating clinical laboratories 2010-11 season to date

GET VACCINATED!

Go to
http://dhmh.maryland.gov/swineflu/getVaccinated.html
and find your local health department for more information.

MARYLAND RESIDENT INFLUENZA TRACKING SURVEY (MRITS)

During week 4, 514 (33.9% of total) participants in the MRITS responded to the weekly survey. Of those who responded, 12 (2.3%) reported flu-like illness, a proportion that had risen steadily for the past three weeks. This proportion is slightly higher than this same week last season, when 2.1% of respondents reported flu-like illness.

We are always looking for more participants for the MRITS. If you know someone who would like to participate, please direct them to our website: http://dhmh.maryland.gov/flusurvey.

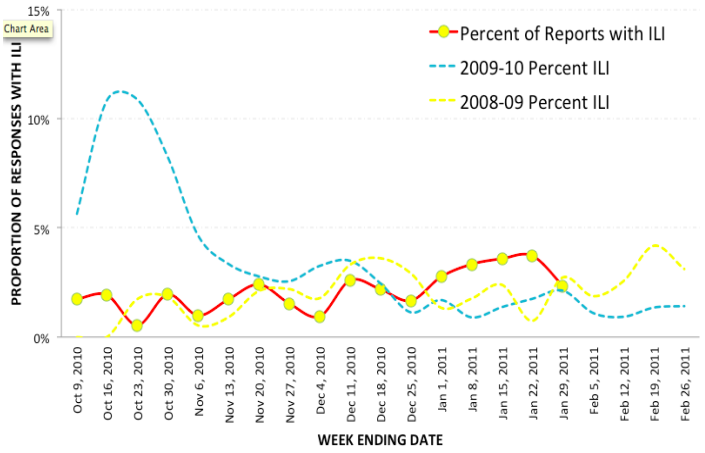

Figure 3. Proportion reporting ILI to the MRITS by week, 2010-11 influenza season

DHMH LABORATORIES ADMINISTRATION REPORTS

During week 4, the DHMH Laboratories Administration performed a total of 107 PCR tests for influenza. Seventy-eight (78) were positive for influenza: 31 were type A (H1N1), 46 were type A (H3), and 1 was type B.

The table to the right shows the breakdown of positive tests by influenza strain for the 2010-11 influenza season to date.

More information on the valuable work done by the DHMH Laboratories Administration is available at http://dhmh.maryland.gov/labs.

Influenza Type	No. (%)
Type A	
H1	**173 (46.8%)**
H3	**185 (50.0%)**
Unsubtyped	**0 (0%)**
Type B	**12 (3.2%)**
TOTAL	**370 (100%)**

Table 1. Number of respiratory samples positive for influenza by PCR reported by the DHMH Labs Administration, 2010-11 influenza season

EIP INFLUENZA HOSPITALIZATION SURVEILLANCE

During week 4, 76 hospitalizations associated with influenza were reported to the Emerging Infections Program (EIP). To date, there have been 427.

To be a confirmed hospitalization associated with influenza, the person must be hospitalized and have a positive influenza test of any kind (rapid test, PCR, culture).

During the same week last season, 14 hospitalizations were reported, with a total of 1,387 at that point in the season. For the entire season (2009-10), 1,458 hospitalizations were reported.

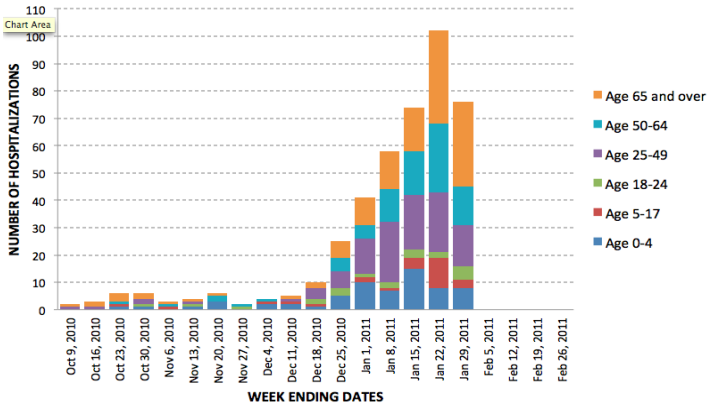

Figure 4. Number of hospitalizations associated with influenza, by age group and week, reported to the Emerging Infections Program, 2010-11 influenza season

DID YOU KNOW?

Between 1962 and 1987, Japan had a policy of mandatory influenza vaccination of school-aged children. During that time, there was a marked decrease in the number of deaths from influenza in elderly people. When the policy was relaxed in 1987 and eliminated in 1994, the number of deaths from influenza in elderly people increased. Researchers believe this is an example of "herd immunity," where surrounding a susceptible portion of the population (elderly) with an immune group (children) **reduced** the spread of influenza. (Vaccine Weekly, April 11, 2001)

REPORTS OF OUTBREAKS IN INSTITUTIONAL SETTINGS

During week 4, five outbreaks of respiratory illness were reported. One was confirmed as an influenza outbreak. Two were outbreaks of pneumonia, and two were outbreaks of ILI. This brings the season's total to 22 reported outbreaks. Last season, a total of 208 outbreaks of respiratory illness were reported. Of those, 33 were confirmed as influenza outbreaks.

An outbreak of ILI is re-classified as an outbreak of influenza if there is laboratory evidence of influenza virus present in the samples collected from case-patients during the outbreak.

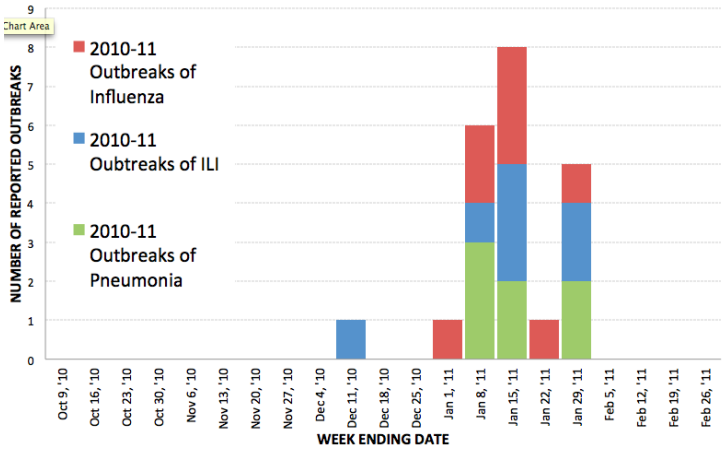

Figure 5. Number of outbreaks reported by week and by type during the 2010-11 influenza season.

EMERGENCY DEPARTMENT ILI REPORTS (ESSENCE)

During week 4, a total of 41,494 visits to emergency departments for all reasons were reported to the Office of Preparedness and Response through the ESSENCE system. Of those visits, 1,382 (3.3%) were for influenza-like illness. This proportion is higher than those observed over the prior two influenza seasons but lower than the previous week.

For more information on ESSENCE, please visit the Office of Preparedness and Response's web site at: http://bioterrorism.dhmh.state.md.us.

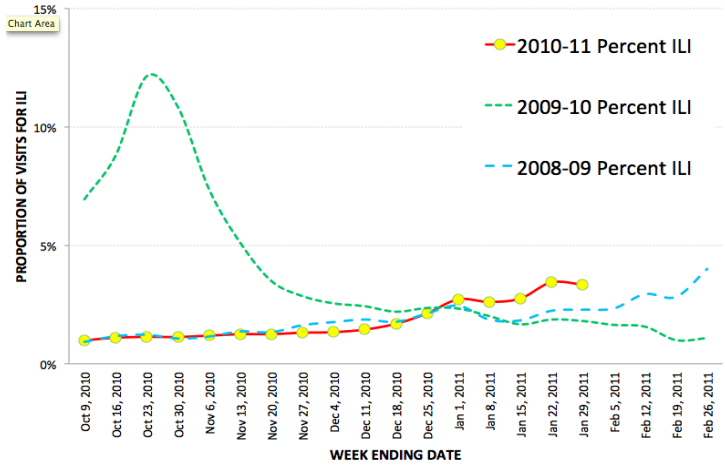

Figure 6. Number and proportion of visits to emergency departments for ILI by week reported through ESSENCE, 2010-11 influenza season.

GOOGLE FLU TRENDS

According to Google, influenza activity in Maryland is currently "**MODERATE**". What does this mean? From the Google Flu Trends Website: "We have found a close relationship between how many people search for flu-related topics and how many people actually have flu symptoms. Of course, not every person who searches for 'flu' is actually sick, but a pattern emerges when all the flu-related search queries are added together. We compared our query counts with traditional flu surveillance systems and found that many search queries tend to be popular exactly when flu season is happening. By counting how often we see these search queries, we can estimate how much flu is circulating in different countries and regions around the world."

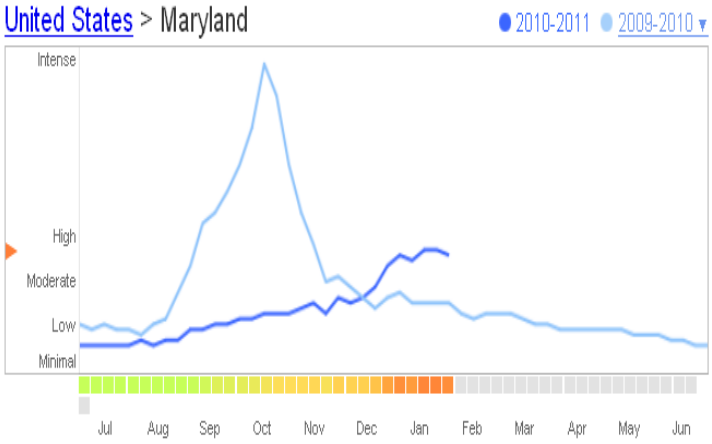

Figure 7 – According to Google Flu Trends, influenza activity in Maryland is currently "moderate". At this time last year, during the 2009 H1N1 influenza pandemic, influenza activity in Maryland was "low" to "moderate".

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ALL THE INFORMATION INCLUDED IN THIS REPORT IS PROVISIONAL AND SUBJECT TO CHANGE AS MORE DATA ARE RECEIVED FROM SURVEILLANCE SOURCES.

THE INFORMATION INCLUDED IN THIS REPORT IS NOT INTENDED TO BE USED FOR INDIVIDUAL DIAGNOSES.

ONLINE VERSION OF THIS REPORT AND PAST SEASONS' REPORTS MAY BE DOWNLOADED AT:

http://dhmh.maryland.gov/fluwatch

FLU SURVEILLANCE IN NEIGHBORING STATES:

DELAWARE-

HTTP://BIT.LY/9Zkp3

DC-

http://tinyurl.com/yj7br9e

PENNSYLVANIA-

http://tinyurl.com/37323xn

VIRGINIA-

http://tinyurl.com/kmnaeu

WEST VIRGINIA-

http://tinyurl.com/39m2kon

CDC NATIONAL INFLUENZA SURVEILLANCE REPORT (http://cdc.gov/flu/weekly)

During week 4 (January 23-29, 2011), influenza activity in the United States increased.

- Of the 6,209 specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division, 2,044 (32.9%) were positive for influenza.
- One human infection with a novel influenza A virus was reported.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.
- Six influenza-associated pediatric deaths were reported. Four of these deaths were associated with influenza B viruses, one of these deaths was associated with an influenza A (H3) virus, and one was associated with a 2009 influenza A (H1N1) virus.
- o The proportion of outpatient visits for influenza-like illness (ILI) was 4.0%, which is above the national baseline of 2.5%. Seven of the 10 regions (Regions 1, 2, 3, 4, 5, 6, and 7) reported ILI at or above region-specific baseline levels. Seventeen states experienced high ILI activity; three states experienced moderate ILI activity; New York City and 10 states experienced low ILI activity; the District of Columbia and 19 states experienced minimal ILI activity, and one state had insufficient data.
- The geographic spread of influenza in 30 states was reported as widespread; 15 states reported regional influenza activity; the District of Columbia and one state reported local influenza activity; Puerto Rico, the U.S. Virgin Islands, and four states reported sporadic influenza activity, and Guam reported no influenza activity.